E1-6981

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

March 21, 2008

David Navecky
Surface Transportation Board
395 E Street, SW
Washington DC 20423-0001
ATTN: STB Financial Docket No. 35095

Re: Alaska Railroad Port MacKenzie Rail Line Extension. Request for Scoping Comments.

Dear Mr. Navecky:

The National Marine Fisheries Service offers the following comments on the scoping process for potential impacts of the proposed Port MacKenzie Rail Line Extension on fish populations, habitat, and water quality in the Matanuska-Susitna Valley. Our comments below detail our assessment of (1) areas that need to be studied closely in the analysis of potential impacts and (2) current engineering practices that can be employed to avoid negative impacts on essential fish habitat (EFH).

Project Status

NMFS has reviewed materials distributed by the Alaska Railroad Corporation, the Matanuska-Susitna Borough, and the Surface Transportation Board's Section of Environmental Analysis (SEA). The documentation submitted by the Alaska Railroad Corporation and the Matanuska-Susitna Borough is preliminary in nature and outlines the proposed design, construction, and operation of a rail extension connecting Port MacKenzie to existing rail lines to the north. Several different combinations of routes and connectors are cited, but essentially three potential rail alignments are under review.

Recently, the SEA informed us that the Alaska Railroad Corporation intends to file a petition with the Surface Transportation Board requesting to construct and operate the new rail line in the Matanuska Susitna Borough. The SEA is responsible for preparing the appropriate National Environmental Policy Act (NEPA) documentation for railroad construction and operation. The SEA has thus filed a Notice of Intent to prepare the draft scope of studies and the subsequent Environmental Impact Statement (EIS) that will be used in NEPA proceedings and permitting review under section 404 of the Clean Water Act.

Essential Fish Habitat

Under Section 305(b)(2) of the Magnuson-Stevens Act, federal agencies are required to consult with the Secretary of Commerce on any action that may adversely affect EFH.

EFH has been designated for anadromous salmon and marine species of groundfish and crab under NMFS's jurisdiction. EFH encompasses estuarine, near shore and offshore habitats and substrate to include pelagic, epipelagic, and meso-pelagic waters and the benthos. EFH for salmon fisheries consists of the aquatic habitat, fresh and marine waters, necessary to allow salmon production needed to support a long-term sustainable salmon fishery and salmon contributions to healthy ecosystems.

Aquatic Ecosystem Processes

The Matanuska-Susitna Valley comprises a very diverse and complex series of interconnected aquatic and terrestrial ecosystems. The terrestrial land form and surface and ground waters maintain equilibrium in complex hydro-geomorphic processes. These processes support forest, wetland, riparian zones, and hyporeic functions and interactions that facilitate the filtration and percolation of waters released to streams and rivers. The connectivity of these aquatic and terrestrial ecosystem processes supports the chemical exchange of organic nutrients and detrital material, transport of dissolved oxygen and nitrogen, and regulation of water pH and temperature.

These interactions support microbial, micro and macro fauna and invertebrates consequently supporting larval, juvenile and adult fish populations. The foundation of these complex dynamics is dependent on the connectivity, interaction, and balance of all ecological functions.

Study Needs

Historically, railroad construction and transportation infrastructure has negatively impacted fresh water aquatic ecosystem function and balance, causing habitat and wetland fragmentation and altering surface and ground water regimes. These impacts are well documented to have particularly devastating impacts on anadromous fish populations by eliminating fish passages, limiting accessibility to spawning and rearing habitat, and eventually leading to declines in formerly stable and sustainable salmon populations.

The environmental studies conducted for the EIS's assessment of the impacts of the proposed action need to be adequate in scope, analysis, and detail to support both the NEPA process and the section 404 permitting review. Each study design and execution should define a clear set of objectives that incorporate correlated statistical design, sampling methods, and efforts to achieve the objectives with a predetermined level of precision and accuracy.

Of primary concern to NMFS is the identification and characterization of anadromous fish species and associated habitat in the affected landscape. We are also concerned with the potential impact to all supporting natural ecosystem processes, such as wetland and riparian zones, hydrologic function and in-stream flows, and water quality within the affected tributary reach. Studies conducted to satisfy NEPA and the permitting process should include identification and characterization of each of these processes within the

impact area of the final rail line alignment. Studies conducted to identify and characterize fish species (anadromous and resident) should address seasonal relative abundance at all life stages. The aquatic studies should also identify freshwater invertebrates, vegetation, and associated habitat and substrate composition. Any tributary reach intersected by the rail line should be surveyed both up and down stream of the sited reach. For the purpose of this discussion, a reach is defined as 20 times a channel's average width at the specified site.

The absence of anadromous species in a surveyed stream reach may not represent the true historic range and may be the result of pre-existing fish passage barriers downstream. Therefore, fish passage barriers downstream of the rail line should be identified to ensure that future restoration efforts will not be compromised by new rail line construction.

Each of the potentially affected tributaries should be identified and characterized as primary, secondary, or tertiary tributaries, according to Rosgen stream classification techniques at level I and II. Seasonal hydrology and in-stream flow variability should also be characterized within each defined stream reach of a proposed alignment.

The final rail alignment should be sited to avoid wetlands, streams, and rivers that bear fish populations (especially anadromous fish). Where preliminary surveys have identified potential wetlands, functional assessments and wetland delineations should be conducted to one half mile of either side of the proposed final alignment. In addition, any fresh water tributaries identified as bearing andromous fish populations should also have functional assessments and wetland delineations conducted to the same distance on either side of the tributary. These surveys should also include riparian characterization and descriptions of cover such as woodland vegetative condition and viability, where wetlands are not present.

Avoidance of Negative Impacts

As part of the EIS, all foreseeable cumulative, direct and indirect impacts need to be presented and discussed. The proposed rail line will necessitate an expansion of the Port MacKenzie facility. Industrial and residential development and expansion will likely follow, as well as connection corridors, associated roads, utilities and secondary development.

With an increased understanding of aquatic ecosystem processes and improvements in engineering technologies used in the development of transportation infrastructure, we suggest that the following design considerations be implemented to avoid disruption of the natural ecosystem functions and associated anadromous fish populations.

Current engineering practices used in the design and construction of stream and river crossings have evolved to avoid negative impacts and maintain natural aquatic biological function and ecosystem connectivity. Elevated bridges, rather than culverts, should be used to span all anadromous tributaries. Bridge design and span must consider the

biological function and hydrology of the entire transected flood plain and account for high-water levels at 50- and 100-year flood events.

Where culverts are the only available option, stream simulation models and methods used in conjunction with open bottom culverts (arched or boxed) allow natural substrate and hyporeic function, thus providing higher levels of interaction between terrestrial and aquatic ecologic process. This design approach supports passage of both juvenile and adult salmonids as well as resident populations of fish and invertebrates. It promotes natural water course, exchange and contribution from woody debris, and naturally occurring detrital and sediment transport and deposition.

Properly implemented stream simulation methods resist habitat degradation associated with water blockage and restriction, creation of velocity barriers, and scouring during high water events. The use of traditional corrugated pipe culverts should be avoided. These methods irreversibly alter water course, eventually becoming elevated or perched and thus preventing fish passage and degrading natural ecological processes.

Best Management Practices should also be employed on any artificial structure to promote natural hydrology and instream flows. Structures built over naturally occurring waters should conform to the natural stream gradients and alignment of the stream channels, thus reducing scour and eliminating potential velocity barriers.

The Alaska Railroad Corporation has a unique opportunity to set an example by constructing a rail line that considers the sensitive nature, relationship, and connectivity of these ecosystem processes. The incorporation of an ecosystem system approach would support healthy and sustainable salmon populations in the Matanuska-Susitna Valley.

We look forward to working with you to address the issues discussed above to minimize the effects of this project on living marine resources, including EFH. If you have any questions regarding our recommendations for this project, please contact Doug Limpinsel at 907-271-6379 or Doug.Limpinsel@noaa.gov.

Sincerely,

Robert D. Mecum
FR Acting Administrator, Alaska Region

cc:
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